University of Alberta

Racing Plans of Elite Middle Distance Runners

by

Gina Elizabeth Arena

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfilment of the requirements for the degree of Master of Arts

Faculty of Physical Education and Recreation

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled Racing Plans of Elite Middle Distance Runners submitted by Gina Arena in partial fulfilment of the requirements for the degree of Master of Arts in Physical Education.

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Nov. 18, 1997

Abstract

The purpose of this study was to explore the racing plans of elite middle distance runners and to describe the components within the racing plans. A hermeneutic approach was used to study the individual components of the racing plan primarily through in-depth unstructured interviews. Eight elite middle distance runners were asked to describe the racing plans they use. The descriptive method employed in the study provided an in-depth understanding of the racing plan as a holistic phenomenon. The main components that emerged from the analysis of the data were: goal setting, mental skills, tactics, and technical considerations. Under the component of goal setting a number of factors were isolated, these included: realism, difficulty, goal series, flexibility, goal type, specificity, assignment and evaluation. The mental skills component included the factors: self-awareness, relaxation, mental imagery, attentional control and self-talk. Tactics, the third component, was broken down into two factors, general and specific. And the final component, technical considerations was broken down into distractors and event considerations. The dynamic, individual and interrelated qualities of the racing plan were uncovered. Future implications of the study indicate further research is needed to explore the complexities of the racing plan and the components it comprises.

Preface: Personal Reflection

Now that my thesis and the process entailed is nearing completion, I can look back in time and reflect on my experiences. At the onset I could only hope for the final day that this would all be complete, but now that the completion is only a moment away I cannot understand where all the time waiting for this went. I will try to forget the hours of frustration in the writing process, however, my personal experiences during the data collection phase will remain a highlight. I would like to mention some of these memories as I feel that they help set a tone for the understanding and enjoyment of this thesis.

I had an opportunity to go back to my home town, Victoria, to collect data for my thesis and to work with some of my mentors and friends in the process. I imagined that I would be accepted back into this culture from which I left, but I did not know how welcomed I would be. This phase of the research was exceptional. I had the chance to get reacquainted with some of the athletes I had previously trained and raced with, the opportunity to watch a lot of great racing at high caliber track meets, and to listen to some of my mentors share their experiences and insights. All in all, I must admit that completing research in an area that I have such a passion for makes all the hard work seem that much easier and enjoyable.

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I would like to express my gratitude to many people who contributed to the completion of this thesis.

Firstly, I must thank my husband, Tony, this could not be completed without his love and assistance. His understanding, support, and belief in me has been vital to the successful completion of this thesis.

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CHAPTER 1

Introduction

The purpose of this study was to explore the racing plans of elite middle distance track runners and to describe the components of the racing plans. The question addressed was "What are the components of a racing plan for elite middle distance track athletes?" Many athletes and coaches implement racing plans, however, the plan is not always successful or beneficial to the athlete. If racing plans are to be implemented, they should incorporate appropriate information to make them effective tools for performance enhancement. An in-depth preliminary investigation into the elite middle distance track athlete's racing plan helped to reveal the most critical components of an effective racing plan. My focal interest is to present the racing plan as a holistic phenomena used by the participants involved in this study.

What exactly is a racing plan? What is the meaning of the racing plan? What do the athletes think it involves? What is the link between goal setting and the racing plan? What is the relationship between other mental skills (attentional control, relaxation, mental imagery, self-talk and self-awareness) and the racing plan? There is limited research focussed on answering these questions, but by studying the qualities the racing plan comprises, an attempt may be made to help better understand the phenomena.

I believe a strong link between goal setting and the racing plan lies within some of the pertinent features of goal setting (i.e., difficulty, realism, type). The plan that the runner uses must contain a challenge and drive the runner toward the goal of his/her race. The plan used however, must be realistic in terms of the athletes' abilities and limits within the race. These two examples suggest that a connection exists between the mental skill of goal setting and the racing plan. However, I think that there is more to a racing plan than just goal setting alone. I believe that mental skills (e.g., self-awareness, mental imagery, relaxation, attentional control, and self-talk) also play an important role in the implementation and effectiveness of the racing plan. I see the racing plan as something athletes have to understand, develop, refine, monitor and evaluate prior, during and after the race (e.g., pre-performance, performance and post-performance). I also view it as

something unique to each individual, created with the characteristics of the athlete, yet applicable to other athletes in a more global sense. The information may help to enhance the performance of athletes. As well, the knowledge obtained from this study may help to focus further investigations into this area.

Rationale of the Study

This study is important for several reasons. First, the research to date does not provide descriptions or analysis of racing plans. Research that has merged to form this area has used the term racing strategy to describe some of similar components. Literature in the area of the racing strategy has focussed on several different components; tactical and attentional (Martin & Gill, 1995; Morgan & Pollock, 1977; Schomer, 1986). However, the racing plan, as a whole, has not yet been isolated as a technique to help enhance performance. Second, the information gathered within this study might be used to further understand the mental skills needed to enhance performance. An understanding of the components within the racing plan may help future athletes and coaches develop effective racing plans.

Definition of Terms

One of the levels of interpretation that took place included understanding the terminology shared between the participants of this study. Below are selected colloquial expressions or idiomatic expressions with clarification and interpretation of their meaning. To help fully understand the racing plan, an understanding and comprehension of the words used among the participants is a necessary step involved in the process. Harris stated (1981, p. 84), "the members of a particular culture interact with one another and through this process develop a shared set of meanings."

- boxed in- when a runner cannot get out from behind a group of runners, as he/she is surrounded (ahead, beside and behind) by other competitors and usually stuck on the inside lane
- dying- losing energy
- falling off - this occurs when the pace is slowed within the race, either by the individual or the competitors within a pack

- gapping - taking a significant lead from a group of runners
- hanging on - just barely maintaining contact with the competitors
- pace - the rate of speed in running (Neufeldt, 1991)
- PB - personal best time in an event
- racing - an athlete can be racing an event, however, in most situations racing was recognized as a situation during the event when the athlete was in competition with the others for the final outcome
- sit with - running evenly with a competitor, usually it suggests a slower pace
- split time - the running time given at certain intervals within an event
- track - competitive running/racing
- tying up - running out of energy, getting full of lactic acid, hitting the wall
- 2, 4, 6 - meaning 200 metres, 400 metres and 600 metres

CHAPTER 2

Review of Literature

There has been limited literature focussed on the racing plan as a whole, therefore, the proposed components will be addressed.

"Recent investigations have recognized the complex nature of various sport personalities and have utilized multivariate techniques to provide a more comprehensive assessment of individual athletes" (Durtschi & Weiss, 1986, p. 73). The racing plan consists of components that deserve recognition and understanding; physical, mental, tactical and technical. Attached to all of these components are the mental skills: relaxation, attentional-control, mental imagery, self-awareness, and self-talk. To understand the racing plan and its effectiveness as a performance enhancement tool, a better comprehension of these components and the role they play is required.

Goal Setting

There is much literature on strategy usage that is theoretically linked to that of goal setting. "Most researchers and practitioners view goal setting as a motivational strategy that enhances performance by focusing attention and promoting increased persistence" (Burton, 1993, p. 467). To understand the role of goal setting and its relationship to the racing plan, I will begin by discussing the goal setting literature.

A number of studies have shown a relationship between the setting of goals and improvements in performance (Locke, Shaw, Saari & Latham, 1981). Much of the research has been reported in industrial/organizational settings, however, there is a growing body of relevant research that supports the success of goal setting in the area of sport (Hall & Byrne, 1988; Kyllo & Landers, 1995). Locke and Latham's (1990) model "specifies that goals influence the direction, intensity, and persistence of behaviour as well as stimulate the development of new task specific strategies that may be necessary to obtain desired levels of performance." The literature has supported the notion that specific, difficult goals will lead to higher performance than easy or vague goals (Hall & Byrne, 1988; Kyllo & Landers, 1995). Personal goals and assigned goals are both

important predictors of performance, providing they are realistic and committed to by the athlete (Fairall & Rodgers, 1997). This research has shown support for goal setting as a means to enhance performance. I can now examine the role it plays in the racing strategy.

Early and Kanfer (1985) found strategy development and choice to have a significant effect on performance. The authors recognized participative goal setting as a process for increasing performance that included strategy development, enactment, and evaluation. The racing plan can be viewed as a way of outlining the course of action to meeting the goal. It must contain some of the key aspects of goal setting as previously mentioned. The idea is to use it as a motivating plan and to help prepare the athlete for the race. The athletes will use different racing plans for each race as there would be different requirements for each competition. Each racing plan can be likened to a short-term goal, ultimately leading to the annual plan or long-term goal. It can contain different elements, with respect to the individual, in order to reach the designated goal. The racing plan can be seen as a motivating plan for meeting the physical, tactical, technical and psychological goals of the race.

Mental Strategies

Mental strategies, in connection with running, have been investigated by a number of researchers (Durtschi & Weiss, 1986; Morgan & Pollock, 1977; Schomer, 1986, 1987). However, it must be clarified that the mental strategies of each of the aforementioned authors were interpreted uniquely in each study. The mental strategy, as defined in the literature pertaining to running, has several different meanings according to the individual authors' focus. Morgan, O'Conner, Sparling, and Pate (1987), in a study investigating the psychological characteristics of the elite female runner, viewed mental and/or race strategies as the setting of the pace (i.e., 'front runner' or a 'kicker'). The setting of the pace would be included as a tactical component in the racing plan, but I believe the racing plan comprises more than just this aspect. Another direction from which the mental strategy has been investigated is attentional focus. The mental strategy used in racing was recognized as a cognitive activity based on two divergent coping strategies, association and dissociation. Schomer (1986) found that the elite marathon runner chose to associate

(pay attention to bodily signals) more than the novice and/or average runner. In essence, some of the elements of the racing plan have been addressed, but I believe that the literature has not addressed racing plans holistically. Aspects in the racing plan such as tactics, mental preparation, and the technical and physical components need to be confronted.

There are many components to consider when examining racing strategies. Hogg (1995) suggested that there are five elements within the racing strategy: (a) performance relevant factors, (b) actual performance factors, (c) thoughts and emotions, (d) self-awareness, and (e) the use of cue words. Performance relevant factors have to do with prescribed race segments (pre-race, start, out of start line). Actual performance factors are differentiated by the "objective measures" by which the athlete assesses the race. In running, these would include performance indicators such as race splits and positioning. The third element contains the cognition and affect of the athlete that occur during the performance. What the athlete thinks on the inside may be reflected on the outside via the performance. Having an awareness of these thoughts and how they affect the individual's performance is an important gauge for the athlete. Self-awareness, the fourth element, will help an athlete determine the best responses within a given situation and prepare him/her for circumstances that arise. This may include giving the athlete a response and/or reaction to other athletes in the race (i.e., kicking when you sense an opponent slowing down or tiring.) The last element is the use of cue words. These can be used to help focus the athlete during the performance and guide the implementation of the racing plan.

It is important to note another approach to the word strategy, and to see how it has been used in the literature when talking about games. A concept, introduced by Strean (1997) is that of strategic control factors: time, space, force, uncertainty and psych, as used within the context of games. Competitive running, or "track," is not considered a game, however, I feel that these factors can be included into individual sporting events. Some of the factors may seem more relevant to track than others, however, all of them can be applied and contribute to give further insight to the racing plan. Time, as a strategic control factor in reference to track, would include details such

as what type of race it is (e.g., qualifying, heats and finals) which would then include different paces and time standards. An example of this strategic control factor is used when an athlete has an advantage (faster PB) over his/her competitors going into a race. The athlete may choose to slow the pace at different stages in the race, hence manipulating time during the race. Space would include positioning within the race (e.g., lead runner, middle of the pack). The strategic control factor uncertainty would deal with shifting pace during the race, prior performances (heats and other races) and possibly visual pre-performance strategies (e.g., quick strides, long warm-up run, presentation). Force could include taking the pack out fast at the beginning or encouraging the lead runner to continue a certain pace during the race. Psych, as the final strategic control factor, deals with manipulating opponents' thinking to gain an advantage (Strean, 1997). These factors can possibly be added into the framework of understanding and help to interpret the racing plan.

Racing Plan

When considering these components, we can assume that the racing plan is not solely composed of attentional coping strategies or tactical components. Goal setting can be used to apply any of these elements and others incorporating different mental skills (i.e., relaxation, visualization, attentional focus). Orlick (1986, p. 3) stated "if you can plan to allow similar kinds of feelings and thoughts to surface more frequently you will perform more consistently closer to your potential." Essentially, the racing plan can be seen as a motivational technique guiding athletes focus to their specific aims and objectives. Schomer (1987) noted that the individual athlete brings unique elements into the mental strategy and I believe these elements should be taken into consideration when looking at the racing plan. Each athlete has a different background that is linked to his/her current participation, (e.g., athletic history, level of fitness, years of competition, personality, level of psychological skills) and these combinations make up differences in each athlete's racing plan. The racing plan of the elite middle distance runner would then remain content dependent on the background and expertise of the performer. All previous experiences should play a role in how athletes prepare for each competition.

Some elements will be more personal and important to the athlete and not necessarily shared across the athletes; other items may be common across athletes. I would like to note here, that it is possible for an athlete to have no conscious racing plan, however I will be focussing on the athletes that implement one.

Another concept similar to racing plans is pre-performance routines (Moran, 1996). The pre-performance routine can be defined as "systematic, routinized patterns of physical actions and preplanned sequences of thoughts and arousal related cues" (Gould & Udry, 1994, p. 483). Therefore, pre-performance routines comprise both cognitive, emotional, and behavioural elements. The actual nature and function of the routine and the racing plan may share similar content.

Taking all of these components into consideration, the racing plan and its possible complexities can be highlighted. A better understanding of the racing plan will expose the qualities that constitute it and make it an effective motivational tool for the middle distance track athlete.

CHAPTER 3

Method

Overview

This chapter discusses the approach to the study, including the design, procedures and analysis employed in conducting the research.

Approach

The choice of a qualitative approach for this study was determined by the suitability of the paradigm for answering the research question, "What are the components of a racing plan for the elite middle distance track athletes?" The aim of the inquiry was to formulate a description of the racing plan and the components it comprises.

Variation and flexibility in the procedure are an important assumption of qualitative research. "Each particular psychological phenomenon, in conjunction with the particular aims and objectives of a particular researcher, evokes a particular method," (Colaizzi, 1978, p. 53) and further, "research procedures of analysis... should be viewed flexibly and freely by each researcher, so that, depending upon his approach and his phenomenon, he can modify them in whatever ways seem appropriate," (p. 59). Hence, these two qualities were given prominent consideration when formulating the study design.

Study Design

The investigation focussed on uncovering, understanding and providing description of the racing plan. The method of data collection consisted of unstructured, in-depth interviews with the participants. Interviews were audio-taped and then transcribed by me. The logbook I maintained during the study and stimulated recall and video reflection portion of the study provided additional sources of data. These three forms of data collection, along with the interviews, allowed me to gather more detail by exploring selected segmented portions of the racing plan. This provided an opportunity for the participants to reflect on information previously communicated and give a deeper and broader understanding to the phenomena.

Method

"The intent of qualitative research is to understand a particular social situation, event, role, group or interaction" (Locke, Spriduso & Silverman, 1993, p. 100). The researcher tries to make sense of the whole experience by looking at the pieces in a thorough manner. This approach might allow for a better understanding of the racing plan and more of an in-depth appreciation. Also, this allowed me to work individually with the athletes and to gain a more personal insight of the individual participants.

Without going into great detail about the epistemological background of qualitative research, I think it is important to understand that this study used a hermeneutic approach to understand the racing plan of the participant. Hermeneutics is used "to study meaningful human phenomena as the basis of practical understanding" (Slife & Williams, 1995, p. 83). Making sense of what is said by the participants is the fundamental principle behind hermeneutics. I wanted to be able to understand how each person perceives the racing plan and the qualities he/she recognizes as an integral part of his/her performance. Traditionally, hermeneutics has been taken to be a way of bringing something which is unclear out of hiddenness or into some degree of clarity. The meaning of behaviour, emotion, and cognition is not always clear, but interpreting behaviour, emotion, and cognition makes them better understood. Many interpretations exist, and a point of view is exactly that - an interpretation. Slife and Williams (1995) stated that there is no interpretation that is unbiased. "The point is that interpretations are always and already interpretations of something" (Slife & Williams, 1995, p. 89). The researcher has a role to accept these interpretations and give meaning and understanding to their existence. Harris (1981) stated:

> If it may be granted that sports are cultural phenomena, then it follows that hermeneutics may be utilized both as a guide to the conceptualization of sports as phenomena which are constituted partially by shared meaning or interpretations, as well as a guide to clarification of research processes which can be used to achieve a broader understanding of these phenomena (p. 71).

The aim of this study was not to confine the findings to specific preconceived

themes, but to allow the information to emerge from the athletes' experiences and report on these phenomena. I remained open to ideas that arose during the data collection process and did not make any a priori classifications as to what fit, but instead developed themes as they appeared from the data.

Participants

The participants that I studied included elite middle distance track competitors. Elite middle distance track competitors were classified as those athletes competing at national and/or international levels in the distances of 800m to 5000m. All but one of the participants fit into this category, as one of the contributing participants is an elite marathoner. I feel that the contribution of this participant does not change the focus of this study. The data collected from this participant offer insight into the racing plan and gives further direction to research within this area (which I address at the end of this study). The race that was recorded (stimulated recall) for this participant, was not a seasonal highlight. It was only a stage in the training process leading toward the ultimate in competition. Dave's (pseudonym) description of this, *...the season, in itself, is the marathon, therefore, all the training leading to the marathon is in preparation for the season. You don't have the opportunity to pick and choose events and the races around it, you have one race and it is your season.* (All of the participants' names have been changed in hopes of maintaining anonymity within the study).

I obtained data from participants of the National Track and Field Training Camp, in Victoria, B. C., held from June 30, 1997 to July 15, 1997, with the help of head coach, Wynn Gmitroski. This camp led to the senior nationals in Abbotsford, B. C., from July 15 to 17, 1997. During the training camp there were three qualifying sanctioned track meets preceding Nationals that I used for the data collection portion of this study. As well, I also used Nationals for data collection purposes.

There were eight participants in the study and purposive sampling was implemented. Purposive sampling is based on informational, not statistical considerations, with its purpose to maximize information not facilitate generalization (Lincoln & Guba, 1985). In purposive sampling, the sample size is based on analysis of the data gathered

during the study, the key being the redundancy of the information received by the participants. Lincoln and Guba (1985) stated that a sample is "expanded until redundancy with respect to information is reached" (p. 233). As well, by concentrating on the depth and diversity of the racing plan, consideration was given to the number of participants involved. Focussing on a smaller number of participants, as opposed to a large group may increase the depth of the information obtained. The participants were selected based on the premise that a racing plan was being implemented as it was not the purpose of this study to develop a racing plan.

Setting

The data collection phase of the research occurred during the National Middle Distance Training Camp. Interviews were completed using the B. C. Junior and Senior Championships, a sanctioned Wednesday night all comers meet in Victoria, B. C., a sanctioned Tuesday night all comers meet in Burnaby, B. C., and at the Nationals in Abbotsford, B. C. The races were dependent on the schedules of the individual participant and the convenience of his/her racing and training schedules. Data were collected during training sessions as well.

Selection

Criteria for selection

Criteria for selection were based on information received from the head coach at the National Middle Distance Track Camp, Wynn Gmitroski. The criteria for involvement in this study contained two elements, the participant must be:

1). a previous competitor at National and/or International competitions and,

2). implementing a racing plan.

The purpose and rationale for the study provide justification for this criteria.

The focus of the study was elite athletes and by choosing those racing at National and/or International level, clearly the criterion of elite was met.

Strategy for selection

The participants were contacted first through Wynn Gmitroski, then via phone or in-person at the track by me. Information about the study was provided, verbal and

written consent were obtained and interview appointments scheduled. The interviews were conducted in the place of convenience for the participants (e.g., home, coffee shop or track).

Selection of participants was aimed at obtaining maximum participation variation, with respect to gender and event. Selection of the participants was guided by the idea that diversity would provide information needed to investigate possible relationships among a number of factors and represent the diverse nature of the racing plan. The sample consisted of eight participants, five males and three females. Participants came from across Canada and their events ranged from 800m to 5000m (excluding the marathon participant).

Data Collection

The primary type of data was typed transcriptions of audio-taped interviews. Another source of data was the logbook.

Interview Process

The purpose of the interview was to gather descriptions from the participants with respect to the racing plan. Special attention was given to interpretation of the meaning of the described phenomena. In the approach used, each participant was interviewed prior to a race, after the race and in a follow-up interview. It is important to note here that flexibility and availability of the participant played a significant role. Many of the participants were in between international races at the time of the study and their training and racing schedules corresponded to this instability. With the different schedules for racing and training, I had to accommodate the needs of the participants. Therefore, the number and length of interviews for each participant varied. Each participant spent approximately three hours in the interview process which varied from one to three interviews. Interviews were transcribed verbatim. Each interview was transcribed using participant initials with the final transcript identifying the participant by pseudonym. As well, any identifying information (competition title and times) were also omitted from the final transcript.

Ongoing interpretation and analysis

The ongoing interpretation and analysis of the interviews proceeded in the following steps:

1. The first step included the transcription of the audiotapes.
2. The second step included reading over each participant's transcript while the audiotape was playing in order to check the accuracy of the transcription.
3. The third step included reading the transcript again and extracting significant statements, words, phrases and paragraphs, which were highlighted and coded for easy access on return to the transcript.
4. The fourth step included trying to determine the natural meaning unit from the significant statements, words, phrases and paragraphs.
5. The fifth step, which is tied into the final written work, included organizing the extracts form the transcripts into the final themes.

Typed transcription

The primary source of data collection was the in-depth interview involving the participant and myself. Participants were encouraged to communicate freely and share their ideas and experiences with the racing plan.

Prior to the first interview, each participant was contacted and dates were set for the interviews. Before audio taping the first interview, a description of the purpose and nature of the research and consent form (see Appendix A) was signed. The number of hours of interviews for the participants ranged from two to six hours in length. And the number of interviews ranged from one to three. This was an area of some variability across the participants. Each participant had a different training and racing schedule and therefore the interviews were based on the availability of the participant.

Conversations began with asking the participants to talk about their running this season for the purpose of establishing rapport with the participant as well as gathering background information. The structure of the interview was based on the individual participant's conversation and questions and/or probing centred from this. "The researcher asks questions pertinent to the study as opportunities arise, then listens closely

to people's responses for clues as to what question to ask next or whether it is important to probe for additional information" (Maykut & Morchouse, 1994, p. 81). The questions and conversation that occurred during the interview were not something that already had an end in view, instead it sustained its own vitality in a way which could not be determined a priori, but only as it unfolded. Research questions focussed on the interpretations that the participant had of the racing plan. Participants were encouraged to describe feelings, ideas and experiences outside of the racing plan as well, in hope of shedding more insight to the racing plan. According to Patton, (1990) "the fundamental principle of qualitative interviewing is to provide a framework within which respondents can express their own understandings in their own terms" (p. 390).

I reviewed the data obtained from participants and areas where further elaborations were needed were noted in preparation for the second and/or third interview.

As the researcher, I provided very little input regarding my opinions and personal biases and listened in an interested, nonjudgmental and responsive manner. Interviewing continued until the descriptions contained a substantial amount of information of the phenomenon in order for understanding to become clear.

Logbook

Another source of data was the logbook. It consisted of data from observations during training and racing, conversations outside of the interview and during the interviews. The data gathered in the logbook had separate sections: one included the descriptive data, another included interpretations and a final section that acknowledged any personal biases that could potentially influence data collection or analysis as they were recognized.

Stimulated Recall and Video Reflection

Stimulated recall is a video feedback method in which the researcher views the tape with the filmed participant. By using stimulated recall I hoped to gain a better understanding of the racing plan. It was used to help generate conversation on specific topics of the race and elicit recognition of some aspects of the race not previously mentioned. The participant watched the videotape the first time making no comments and

then the videotape was watched repeatedly while selected segments (chosen by me and the participant) were discussed more in-depth. This allowed for the prompting of memory and a detailed analysis of portions of the race and the racing plan being used. This interview was tape-recorded for further analysis.

The time of the stimulated recall of the race also occurred with variation to the requirements of the participants. It occurred at a time of convenience after the race, anywhere from one hour to three days later.

At this time I must also note, that not all of the athletes completed the stimulated recall portion of the study. Another element closely related to stimulated recall was brought in due to the requirements of the athletes. This included a reflection of prior race/s that were already on videotape. Included with this session of recognition were races at major world events (i.e., Olympics, Commonwealth, Worlds). To elaborate on the video reflection, it is important to understand that when discussing the racing plan in the context of past reflection, it was easier to note the growth and changes when watching a succession of races. Stimulated recall did not offer the opportunity to recognize personal differences throughout the races as only one race was commented on. The visual reflection gave the participants that were involved in this the opportunity to judge and comment on the differences and similarities of the racing plans in view.

Data Analysis

The procedural steps employed in the study are demonstrated below with an example of descriptive data.

In the first step of analysis, the transcriptions of participant descriptions were carefully read, so that I could acquire a feeling for and an understanding of them.

In the second step, words, phrases, sentences, and/or paragraphs that directly pertained to the racing plan were coded. For example, one participant's comments, *having three types of goals*... was coded.

In step three, recurrent themes emerging in the study were combined with relevant statements and then grouped into categories of themes for each transcript. Hermeneutics has to do with understanding the different perspectives and interpretations of the

participants. The theme construction followed this approach to understanding the racing plan as it involved linking similar interpretations about similar concepts. This helps give a broader understanding to the components and the holistic essence of the racing plan. During analysis I focussed on the question, "What components are an integral part of the racing plan?" For example, recurrent themes such as 'self awareness' and 'self-talk' emerged and illuminated the understanding of the racing plan. The themes that surfaced reflected the interactive quality implicit in the descriptions of the racing plan.

In step four, the results of the study to that point were integrated into a description of the racing plan. In this step, the descriptions of the racing plan were formulated as statements. Dialogue with the thesis supervisor, committee members, and other mentors in the field of research provided feedback, which assisted with the interpretations of the data and further supported the themes.

Categorizing themes provided a framework for presenting the data. The categories of themes provided different perspectives and interpretations from the participants and helped to give a holistic meaning and understanding to the racing plan. This step of the research process served to give a descriptive identification of the racing plan and its meaningful parts.

The portrayal of information, in the theme descriptions, includes verbatim excerpts of data combined with literary references to reveal how the analysis is firmly grounded in each individual experience and to illustrate how personal insight and interpretation are linked. "Presentations of primary data allows the participants in the study to provide a rich source of information separate from the interpretations of the researcher" (Krane, Andersen, Strean, 1997, p. 216). I have a responsibility to describe phenomena in ways that portray how they were experienced by the participants, but also to inspire the reader's trust in the accuracy of what is portrayed. Duncan, (1986, p. 52) stated "the point of hermeneutics is to help the reader or observer experience the meanings the investigator has uncovered. Obviously, the best way to accomplish this goal is to include lots of text as supporting evidence." It is important to note here that all names have been changed within this study so as to try and maintain anonymity of all the participants involved.

However, working with a group of elite middle distance runners makes it difficult to maintain the anonymous identity of the participants, so in an effort to keep the information as such, competitors and competition titles were removed within the written text.

The results of the study were integrated into a general description of the topic (see Chapter 5 - Synthesis and Discussion of Research Findings). Findings from the study were related to perspectives existing in the relevant literature to confirm outcomes and facilitate further reflection.

Provisions for Trustworthiness

A number of measures were taken to ensure the integrity and accuracy of the findings. "The investigator not only has a responsibility to describe phenomena in ways that portray how they were experienced by the participants, but also to inspire the reader's trust in the accuracy of what is portrayed" (Strean & Eklund, 1997, p. 6). Trustworthiness can be described as a way of persuading the audience that the findings of the study are worth paying attention to and worth taking account of (Lincoln & Guba, 1985). I endeavoured to provide clear and detailed descriptions of all the information portrayed in hopes of providing the reader the opportunity to transfer the information in the study to another setting, context or place in time.

Credibility

Lincoln and Guba (1985) suggested that obtaining credibility is another way of establishing trustworthiness in a study. Credibility can be achieved in a variety of ways in the study: prolonged engagement, triangulation and member checking. Prolonged engagement is the "investment of sufficient time to achieve certain purposes " (Lincoln & Guba, 1985, p. 301). The period I spent collecting the data was extensive and I interviewed the participants repeatedly. I also feel that my background and prior experiences within the area of middle distance track competition grant an appropriate orientation to the situation and culture of track athletes and hence, the participants of the study. Triangulation is a technique used to improve the probability that findings and interpretations will be found credible (Lincoln & Guba, 1985). It ensures that each piece of data collected is validated against another source and/or method. Data triangulation

was achieved by comparing data from the interviews with the logbook and background information of the participants. As well, each participant's interpretations of the racing plan helped to establish the credibility of the other participants' interpretations. Member checking allows the participants to "purport that his or her reconstructions are recognizable to audience members as adequate representations of their own and multiple realities" (Lincoln & Guba, 1985, p. 314). This step in the process of establishing trustworthiness also depends on whether my description and interpretations of the data accurately reflect the experience of the participant. The participants of this study were involved during the data analysis portion and in a separate interview to respond to the claims made in the process. Rephrasing of key points during the interview (by me) allowed the participants to recall additional detail to attach to the overall portrayal of the racing plan.

Verification

A follow-up interview session was used to confirm that the contents of the literal transcriptions of the interviews were processed correctly. "Taking findings back to the field should not be seen as a test of the 'truth' but an opportunity for reflexive elaboration" (Sparkes, 1992, p. 33). Fetterman (1989) suggested:

> These readers may disagree with the researcher's interpretations and conclusions, but they should recognize the details of the description as accurate. The ethnographer's task is not only to collect information from the emic or insider's perspective, but also to make sense of all the data from an etic or external social science perspective. An ethnographer's explanation of the whole system may differ from that of the people in the field and at professional meetings. However, basic descriptions of events and places should sound familiar to native and colleague alike. (p. 21)

As well, at this time I also included a debriefing. This allowed me to answer any further questions with respect to the study by the participants.

Presuppositions

Eliminating all presuppositions from a research approach is impossible. In seeking

to understand human actions we can draw on our own experiences and cultural knowledge and through that reach understanding (McMillan & Schumacher, 1997). Thus, I scrutinized, analysed and examined presuppositions throughout the study. Assumptions can function as beliefs, convictions, opinions, expectations or acceptance of things as true conceptualizations of reality. Personal beliefs that could potentially bias a study, once identified can be bracketed and monitored. Presuppositions that are not acknowledged may inhibit the search for understanding. Specifically, bracketing is the process of uncovering and articulating the researcher's predispositions and biases by means of self-reflection. In this way the researcher's frame of reference is clarified. Bracketing is an ongoing process. In determining personal beliefs, an attempt is made to differentiate assumptions from what participants are actually saying about their own experience. This is necessary in order for researchers to realize where their prejudices and biases are in terms of the phenomenon in order to put them aside and analyse the data on "their own terms; to allow the data to 'speak' to the researcher without being clouded by the researcher's preconceptions and presuppositions" (Wertz, 1984, p. 43).

Researcher's Role

As the primary data collector in this project it is important to identify personal values, assumptions and biases at the outset of the study. As stated by Locke et al., (1993, p. 107) "the investigator's contribution to the research setting can be useful and positive rather than detrimental." My interest in this study comes from a background of competitive middle distance racing. I was recently involved in this area and believe that my understanding and background enhanced my awareness, knowledge, and sensitivity of the participants and the setting in which I took part. Curiosities during my own running history have given me the motivation to pursue this study. While running with the University of Victoria varsity team (1990-1995), I had the opportunity to work with a sport psychology consultant and we looked at developing a racing plan to help me with the mental aspect of the race. This was a new and exciting discovery for me and began my interest into this area of research. My willingness to elaborate my understanding began from the knowledge of not knowing how to deal with different circumstances during

competition and the problems deviating from this domain of my life.

I acknowledge that certain biases and my previous experiences will be brought to this investigation, yet these are the same reasons that encouraged me to investigate this phenomenon. However, these biases did "shape the way I view and understand the data I collect and the way I interpret my experiences" (Cresswell, 1994, p. 164). I began this study with preconceived notions which gave rise to my knowledge of not knowing and understanding the racing plan and this has driven the processes of the study. I was aware of my subjectivity and constantly monitored the role it played in the research process. In so doing, I recognize that my background may present itself in some shape or form, but the goal was to try to consciously suspend any preconceived suppositions regarding the racing plan.

I believe that some of my presuppositions, biases and subjectivity influenced and contributed to the study in a positive manner. From my personal experience in racing, I knew when the participants could and could not be approached in the race setting. I could read the athlete's mannerisms, and respected them with the utmost care so as not to jeopardize the data analysis process. I also feel that I could truly understand what the participants were discussing and the context in which it was represented. At no point during the study was I ever considered an imposition to the participants and their training schedules. This was expressed by all of the participants throughout the data collection phase, as well as during contact after this phase. The information discussed in the interviews was deep and meaningful partly due to my previous exposure to the athletes (prior training and competition). My presence and role within the culture was accepted and played an important part in my communication with the participants. The interaction that I had with the participants was based on trust and the level of disclosure with the partipants would provide evidence of this relationship.

Ethical Considerations

As the researcher, I have an obligation to respect the rights, needs, values and desires of the participants in the study. Participant observation invades the life of the informant and sensitive information is frequently revealed (Spradley, 1980). The

following considerations were used to protect the participants' rights: (a) the research objectives were given verbally and in writing so that they were clearly understood by the participants (including a description of how data was used), (b) written permission was required of all participants, (c) participants were informed of all data collection procedures (audiotape and videotape recording and observation), (d) any written interpretations will be made available to the participants, (e) participants were allowed to withdraw from the study at any point without any repercussions, (f) all the information obtained was considered confidential and kept in secure storage, (g) all participants will maintain anonymity and pseudonyms were used in the write-up in order to maintain this.

Limitations of the Study

The study was exploratory in nature and meant to be a beginning point for a more complex description of the qualities of the racing plan (see Chapter 6 - Future Implications). While the number of participants may have been small, it may be representative of the elite middle distance track runners in Canada. The descriptions used by the participants may represent a reality of experience for other people not in the study who are involved in middle distance track.

Theme Emergence

Before going into detail about the themes that emerged in regards to the racing plan, I would like to explain how the themes emerged from the data. I previously noted that my background, presuppositions and biases would be reflected and would contribute to the narrative of the study. I suggested that factors, such as mental skills and tactics, would be represented and would play an important role in the racing plan of elite middle distance track athletes. I did not confine myself to these a priori expectations, however some of them were supported in the interviews and observations of the participants during the data collection and analysis portion of the study. Any information that was deemed important, was repeatedly discussed or was emphasized as a key component to the racing plan of the participant, was noted and categorized. In essence the themes were not a priori selected, but instead consistently supported by the participants. The results of these categories were shaped and formed into the resulting themes.

Defining the Racing Plan

One of the important features of the inductive research design is the flexibility it contains. I felt at the beginning of this study that the word racing strategy would encompass the phenomena at which I was looking. However, after beginning my data collection phase I realized that this term was limiting. The participants were using the term "racing strategy" synonymously with that of tactics. One of the participants (Scott) suggested that when he thought of strategy it only contained the tactics, but that all of the other parts were about physical and mental preparation. This however, was not the goal of the research. I feel that the racing strategy or 'tactics' of the race are only a component of the phenomena in which I chose to study. Therefore, I felt that it was best to change the terminology, to clarify and give more insight to the phenomena I am looking at. I use the term racing plan to describe the preparation of the race, the components within the race and thus the phenomena of the race. Racing strategy will be used for description of the tactics employed during the race.

CHAPTER 4

Research Findings

Overview

The following section will introduce the themes that emerged from the study upon analysis and interpretation. Themes emerged from the participants' accounts and deepened my understanding of the racing plan. Included in this section are a large portion of verbatim quotes from the participants as I feel that their interpretations give expression and understanding to the racing plan. I have interpreted the racing plan to consist of a number of components and with some factors underlying these components (see Figure 1). All of these components have a separate role but also contribute to an underlying relationship. The themes that I have interpreted can be represented within the following labels: goal setting, mental skills, tactics and technical considerations. Goal setting can be broken down into a number of factors: realism, difficulty, goal series, flexibility, goal type, specificity assignment and evaluation. The factors that are involved with the mental skills include mental imagery, relaxation, self-talk, self-awareness, and attentional control. The racing tactics are represented generally and specifically to the middle distance events. The technical considerations, in regards to the racing plan, include factors such as distractors and event considerations.

Theme 1- Goal Setting

'Goals' are understood to be mental representations of outcomes which people strive to accomplish (Poag & McAuley, 1992). Goals can help athletes in a number of ways. They can help motivate athletes by helping them to concentrate and attend to the task at hand. Goals may also further increase the persistence and intensity of the athlete (Burton, 1993). The goal setting that was discussed in the interviews of the study included many different components, many similar to the ones that were discussed at the beginning of this paper. The following factors below demonstrate how some of the participants use this information in their racing plans.

Goal setting is a reliable motivational technique (Kyllo & Landers, 1995). Hall and Byrne (1988) stated "that many coaches and physical educators intuitively accept that

RACING PLAN			
Goal Setting	Mental Skills	Tactics	Technical Considerations
realism	self-talk	general	distractors
difficulty	relaxation	specific	event considerations
goal series	attentional control		
flexibility	self-awareness		
goal type	mental imagery		
specificity			
assignment			
evaluation			

Figure 1. Conceptualization of the components and factors of the racing plan.

goal setting will lead to performance enhancements in sport, given its positive beneficial effects in other performance domains" (p. 185). The overall effectiveness of goal setting in performance enhancement appears to be well supported (Kyllo & Landers, 1995).

At the beginning of this study I purported that a link between goal setting and the racing plan would exist. This statement was given support throughout the interviews. The racing plan was recognized as an outline and motivating element for the preparation of a race.

Dave: *... a race plan as an outline to follow for the upcoming season. I know what my goals are and use that to keep it going.*

The racing plan is also linked to the psychological skill of goal setting, as it contains some of the key aspects of effective goal setting: realism, difficulty, flexibility, goal type (outcome vs. performance) specificity and goal assignment. The participants mentioned these aspects in regards to how their racing plan must be used to meet the physical, tactical, technical and psychological goals of the race.

Realism

The racing plan must be *realistic* (Brian) in terms of the objective and aim of the athlete. The realism of the goal was stated numerous times by the participants.

Mary: *...you have to be realistic too.*

Gary: *I pretty much go into a race against a guy like the world record holder and the Olympic champion realizing that I'm not going to win the race.*

The athletes recognize that setting goals within the racing plan must be realistic in terms of their own personal ability. The racing plan is about being real to yourself, not fooling yourself about your capabilities and strengths. Dave talked about being realistic and how his coach prepared him for this:

He kept telling me, you know when you go into it's going to be tough and it's going to be really hard, and it's not an easy race, and don't fool yourself, don't romanticize things, you're going to hurt...

Difficulty

The literature (Hall & Byrne, 1988; Kyllo & Landers, 1995) supports the

statement that clear, difficult goals will lead to higher performance than easy or vague goals. The goals that the participants use or have, motivate them to reach higher levels, to strive toward improvement, which leads to performance enhancement. Therefore, including difficulty into the racing plan, with respect to the goals, would be conducive to enhancing performance.

Mary: *You set your goals a little bit higher sometimes.*

Andrea: *Have goals that take you where you have never been before and this is really scary.*

Goal Series

A common theme among the participants was the progressive pattern of goals used for different races. The athletes did not simply set a single goal for the race (racing plan), instead, they frequently set different goals, with different degrees of difficulty within these goals. Not only was there an achievable and successful component, but they also included a dream-like or ultimate goal that served as an outcome with a low probability of likelihood. This type of goal series allows the athlete to achieve success with the realistic goal, yet still reach higher toward his/her dream without a predetermined disappointment. Goal series contributed and were used frequently in the racing plans of the participants.

Dave: *My first goal for success was to be in the top twenty and qualify for the Olympics, second goal to be in the top sixteen, and therefore B-card and my dream goal to be in the top ten.*

Andrea: *I would have to set really specific goals, but I always make it like, one would be a realistic goal, like what's acceptable for me, I would be like 4:** is acceptable, top five is acceptable, what's good, top three is acceptable 4:**, and then what would kind of be like a dream... so it would kind of be like I would set three levels for myself. Because I would try always, even going into every race that I hadn't prepared for well, I would believe anything is possible.*

Flexibility

Another key aspect to the racing plan is having flexibility within it. Not only flexibility in the racing plan prior to the race, but also being able to adapt to changes

during a race that may alter the goals and hence the racing plan.

Mary talked about reaching a goal and then having to make new goals once the old one had been unexpectedly achieved. *I had to change my goal because all of a sudden my old goal was to qualify... and then I went I've done that now, so now what's my next goal.* Therefore, flexibility within the racing plan was required. Being able to adapt to different outcomes during the season and using that information to change the goals and racing plan and consequently enhance the performance.

Scott: *I was hoping for instance this past weekend that I could maybe sit with ** (name omitted) and that other guy,... , and just hold on to 600 and see what unfolded in the finish, but I sort of lost touch after a lap, I had to change my mind half way through the race and focus on just maintaining my place and where I was at.*

Goal Type

This aspect of goal setting is tied to the controversial area in the goal setting literature of performance versus outcome goals. "Performance goals provide standards that can enhance sport confidence whereas outcome goals can undermine sport confidence" (Martin & Gill, 1991). Weinberg and Gould (1995) suggested that there are two types of goals in sport. 'Outcome' goals "typically specify the desired competitive result of an event (i.e., to win a race) in which people compete against others" (Moran, 1996, p. 175). So, in other words, they are based on things that are not necessarily controllable. Performance goals refer to self-referenced behavioural standards, or controllable events. Therefore, if an external element changes the final outcome, the athlete may lose self-confidence even though he/she had no way of controlling it. There has been controversy about which type of goal is more effective and hence which goal type should be employed. "The danger associated with an outcome oriented philosophy is that it presumes that the athletes are in control of winning and consequently are consistently successful and feel totally responsible for their successes." (Hogg, 1995, p. 1.8). Basing personal goals on external factors alone, may lead the athlete astray. Being able to focus on the performance process orientation allows the athlete to focus on success in regards to surpassing his/her own performance standards rather than those of

the other competitors (Hogg, 1995). The racing plan of the participants generally included information that was of both natures. However, the key to success is to ensure that the information the athletes use for their performance and hence their racing plan, is inclusive of the needs required individually. I am not suggesting that either goal type is better or worse than the other. Instead I am simply recognizing the strengths and weaknesses of each goal type and implying that they have their own advantages and disadvantages and that these should be and were considered and recognized by the participants as well.

Andrea: *Whatever else anyone else is going to do is a whole something you can't control, you can make predictions, educated guesses of what you think they are going to do and conduct yourself accordingly.*

Dave: *...taking a look at those outside factors that may play a factor or role in the race. Controllable vs. uncontrollable. What things I can do or control the outcome of the race and then what things that are external that are out of my reach... I want to be aware of others and that is important but not to count on others.*

Making sure that the goals are within control of the individual is a crucial aspect. There is an acceptance of what the individual can control and an awareness of the factors that are out of the individual's control. You never know how an external factor is going to change on any give day or in any given race. They are not static factors, instead they are dynamic. The racing plan of the participants recognized the static and dynamic features on which they based their information.

Specificity

The type of racing plan that is effective is one that is specific, alike one of the key goal setting aspects. The racing plan should offer guidance and help to motivate the athlete. Specificity as a goal and within the racing plan is an important aspect. Gary talks about how the racing plan goes from general to specific the nearer the race approaches:

Gary: *You mentally resign yourself to the training you know it's going to take to accomplish those goals and then sort of as you move closer to the actual realization, those things become more specific, you start to take care of finer and*

finer details to what needs to be done to accomplish the goals.

Dave: *I think just because they were such huge goals, very defined goals as to what I wanted to do... So I think that's what really made it especially satisfying for me.*

Therefore, specificity of the racing plan will help lead to higher performance.

Assignment

In a study completed by Fairall and Rodgers (1997), goals were deemed as important predictors of performance whether or not they were personally set or assigned. These authors suggested that as long as there are acceptance, commitment, and clarity there are no differences between participant, self-set and assigned goals. The participants in this study placed an emphasis on the importance on the role of their coach within the racing plans. The statements made by the participants support this information. It does not matter where the goal or the racing plan comes from, the important factor to consider is that it must be realistic and be committed to by the athlete.

Dave: *I talk to my coaches about it and that's what gives it the accountability.*

Mary: *...in the end I make my decisions for myself and he's just there to guide...*

The racing plan is made-up of parts and these parts are determined by the athlete and the coach. Another consideration for the racing plan, connected to this aspect, is the personal belief that the racing plan is genuine. Rachel talked about how the racing plan had to be real to be effective, not just a memorized piece of paper, or it would become a stress to her. The racing plan had to have meaning and significance to the participants

Evaluation

Evaluation is the final factor under the goal setting theme. It plays an important role in the perpetuating process of the racing plan. Evaluation, as a factor, drives the athletes toward the next racing plan and the process involved with its creation. It guides the development and implementation of the succeeding racing plans. The participants commented on the evaluation component of the racing plan, highlighting its role within this theme. This aspect is a part of the process that moves the athlete toward improvement and is also another aspect of motivation incorporated into the racing plan. If the athlete can use the outcome of the race, in regards to the goals set within the racing

plan, then he/she can reflect on these and evaluate his/her attempt.

Dave: *It sort of becomes obvious if it works out right, if like your goal is to win a race then, and you win the race it kind of tells you.*

Brian: *...evaluation of how the run went, understand why I did that and get ready for the next one.*

Summary

All of the above components play an integral role in the development and implementation of the racing plan. Therefore, the links between goal setting and the racing plan are an important component to the racing plan and furthermore the performance of the athlete.

Theme 2 - Mental Skills

The following section contains a number of mental skills. Those that will be discussed include self-talk, relaxation, attentional control, self-awareness, and mental imagery.

Self-Talk

The runners all mentioned self-talk as part of their racing plan. This usually occurred during the actual race, and was used as a motivator. Self-talk can play an important role in the athletes' racing plan by helping to initiate and maintain positive motivations (Hogg, 1995). In essence, anytime that the athletes think to themselves they are actually talking to themselves.

Dave: *Positive self-talk is very important. If there are things like, self-doubt, I cover it with self-talk and keep it all positive.*

Andrea: *I just kept talking to myself, you are running good you are running well, it was good self-talk.*

Gary: *I'll just try and reassure myself that I'm ready and confident and keep the confidence on a role.*

Gary: *You've always got to be pumping...positive thoughts in your head, as soon as you start thinking negative thoughts then things are going in the wrong direction...*

Scott: *I kept thinking stride with him and don't let him go by you.*

Guy: *I was coming down from the high avenues to the low avenues, and so every avenue, as I was catching this guy, every time I got into the new intersection, I would be counting, which was kind of really bizarre because there was a camera truck and they were kind of like what the hell is he doing, but that really helped me to keep the rhythm going.*

Mary: *I was thinking about sprinting, and I was thinking about just giving it all just going for it just kind of running flat out and just doing everything, everything I possibly could to run, to run till I couldn't run any faster basically, that's what I was thinking.*

Mary: *...well maybe for me it's soothing, like I said just to get a certain relaxation like it's mainly, I don't think I ever swear, it's just more, sometimes it's just feelings that come right, like panic, when I panic that's not like I'm thinking, nothing is going through my mind except this feeling and that's when you lose, like I am, I think that's when words would help, or when you would get to use them, but like ya, when you have those words in your mind and you talk to yourself it's a really good way of focussing and telling your body it's not tired I guess, and it's not like hey this is easy, you feel really relaxed, look at how relaxed, you know you feel really good and this is no big deal, you can convince yourself that you are not tired, like you convince yourself that this feels so good and I'm not even breathing hard, you know and it works, like I said you don't feel as exhausted, whereas if I thought like oh my god this is so hard, we're going so fast, gee you just deteriorate you just get so tight and tighten up, and I think it just wouldn't work.*

Moran (1996, p. 181) suggested that by "conducting a well-learned set of 'cue' thoughts and actions, athletes learn to focus on what they need to do rather than on what they hope to avoid." Cues can help athletes to concentrate on important aspects of the racing plan and can trigger the required responses.

Dave: *One week before I race I usually come up with some key phrases or even the day or two before the race. The key words for the race vary but solidify in the last two*

weeks. They come out of my training and really help me to focus. They help to emphasise the positive.

Brian: *I just relax, relax, relax ... you try to keep them short, one syllable if possible, like go or hands.*

Gary: *I'll be thinking be patient, be patient, be patient with it as far as the kick goes, I'll be thinking okay stay relaxed stay relaxed, be patient and I'll be thinking put yourself in a good position...*

Gary: *I had a key word in my head the whole day beforehand, it was patient, I was trying to be as patient as possible, not go to early and then when I went I wanted to be, it to be like an explosion.*

Scott: *I was just thinking get out quick, get out quick.*

Scott: *It went so fast I was just sort of thinking okay, relax, stay smooth.*

Mary: *...that is the only word I kept thinking, hang on, hang on.*

The cue words used by the participants were very individual and carried significant meaning to them. It is also important to mention that some of the participants changed their words according to the requirements of the race (e.g., heat, final, significance of event).

Rachel: *The key words are the same pretty much...*

Rachel: *... strong and calm work for me...*

Relaxation

"The quality of an athlete's performance often depends on how aroused the athlete is" (Cox, 1994, p. 88). Therefore it is important to note that there is a state or level of optimal relaxation dependent on the athlete, again emphasizing the individuality of the qualities of the racing plan. It is up to the athlete to know his/her 'ideal' state of readiness that is required for competition. The participants discussed the negative effect of being too relaxed and the effect this had on their performance. This emphasizes the importance of finding a suitable level of arousal for each individual. Not every athlete requires the same amount of relaxation. Each individual is unique in how they deal with the racing situation and should have the mechanisms and ability to figure out what is best

for them.

Andrea: *I would just really focus on relaxation.*

Mary: *... you run fast but you run relaxed and when you come to that point when you feel you are dying or you're tying up the best thing to do is take, it almost feels like you are slowing down by one step, you feel like you were losing a second, and you kind of just slow a bit. I think it's a mental thing, I don't think you actually slow down I think you just, it's just this mental state where you just of relax, you feel like you have slowed down for about a second, but instead you're just maintaining your form you're going through, it's hard to explain. Rather than struggling so hard, you just kind of, it's just like taking a deep breath and going, and then you're just kind of coasting.*

Andrea: *...she doesn't have any pressure just relaxation.*

Mary: *Like it's being relaxed, it's being calm.*

Andrea: *...when she gapped me I didn't worry about it, I think it shows that I was relaxed.*

Mary: *... if I relax it's a better way of getting to the end and you don't lose as much ground.*

One of the keys to including some form of relaxation into the racing plan is to deal with the effect of anxiety on the physical performance. Again noting the interrelationship between some of these components (i.e., physical and mental link). "Arousal is a motivational construct that reflects the intensity level of behaviour. Optimal levels of arousal or activation are important to attain at will if your athletes are to perform to the best of their abilities" (Hogg, 1995, p. 4.3).

Mary: *...you don't want to be absolutely relaxed.*

Gary: *You can't go into a race feeling too relaxed otherwise you'll feel a little flat and that happened once or twice as well, that's why I like to make sure I'm a little charged up.*

A state of relaxation was mentioned by the participants and some of their methods and means to achieving this state were revealed.

Andrea: *For me it became a source or relaxation trying to figure out how to control my breathing pattern...*

Scott: *I have a way of staying relaxed.*

Guy: *...quite often the night before a race, before going to sleep I'll do a progressive relaxation thing.*

Relaxation as mentioned by the participants was more than simply getting to an optimal level of arousal. Relaxation meant saving all of the energy in their system so that it could be expended during the race. The participants recognized the race as requiring a high energy expenditure and felt that if they could conserve energy during the day then they would have enough for the race. Almost all of the participants mentioned at some point during the interviews that prior to competition they wanted to conserve their energy and that most of them go back to bed, sleep in late, or take a nap.

Brian: *I get really lazy. I usually like to lounge around, it's almost like you are constantly conserving energy for the run, just lounging around carrying your feet.*

Rachel: *...pop back into bed and relax.*

Gary: *The day of the race leading up to it, you know, you want to make sure that you're not going out and using excess energy that you're going to need for your race, you're warm-up and everything. You want to be relaxed the whole day and a lot of times even the day before. So I just spend a lot of the time in the hotel room just watching the television or reading or whatever, I make sure I don't use excess energy.*

The automaticity of the relaxation is a key component for the racing plan. They are not forced moments, but learned experiences and adapted to by the individual. They become so automatic that the athlete does not have to think about implementing them, but instead they occur instinctualy.

Mary: *...it's just kind of an automatic thing that relaxation, it just kind of came over me.*

The occurrence or time of relaxation differed across the participants, which suggests that relaxation is required at different times for different athletes.

Scott: *In my pre-race I sort have done, I tend to sit down and shake my legs out for the*

first half hour before I start warming-up, shake shake shake, even though I could be loose or tight or whatever, it's just that it helps to relax me.

Mary: *... if I relax it's a better way of getting to the end and you don't lose as much ground.*

Relaxation was used by all of the participants in the study. Each of them had an optimal state that they tried to achieve and these were different among the athletes. The key point being that relaxation was a factor in the overall racing plan and helped the athlete achieve an ideal state for performance.

Attentional Control

Having the ability to effectively manage the attentional processes involved in competition and training can be regarded as attentional control (Hogg, 1995). The concept of attentional focus includes the ability of an athlete both to narrow and to broaden his/her attention when necessary (Cox, 1994). Optimal performance depends primarily on the following attentional skills:

1. The identification of task relevant stimuli or cues,
2. The exclusion of all distractors,
3. The ability to maintain or shift to the appropriate focus of attention (Hogg, 1995).

Successful athletes are less likely to become distracted by irrelevant stimuli and maintain a more task-oriented attentional focus rather than be distracted by outcome and worries (Cox, 1994).

Scott: *...then I sort of shut everything out and concentrate on myself.*

Selective attention

The participants' ability to attenuate irrelevant sensory information and to pay selective attention to valuable and relevant information is a component of the racing plan. This was especially emphasized in reference to the crowds, which were usually not heard by the athletes as they 'concentrated' on the race or some aspect relevant to the racing situation and hence the racing plan.

Guy: *I can't say I've ever, you don't hear the crowds...there is so much in terms of what's going on, in terms of people moving and you moving and what you need to*

do.

Gary: *I didn't hear anything during the race, I didn't hear anybody...all I remembered was staring at the 161 at the back of ** (name omitted) shirt for the first three laps.*

Andrea: *I think sometimes it can inhibit you from carrying out what you want it to do. Like I've run some races where you know the crowds just so loud you can't even hear yourself think.*

Association vs. Dissociation

Literature focussed in the area of running and attentional focus purported that associative mental strategies are more successful and more often implemented by elite marathoner runners (Schomer, 1986, 1987). "Associative coping strategies are thought processes where the runner focuses on internal sensations such as body awareness, muscular tension, and racing strategy, whereas dissociative coping strategies are thought processes that shun internal sensory input because of the discomfort the input can sometimes create" (Tammen, 1996, p. 1). The author suggested that it is not necessarily the distance of the race or the level of expertise that dictates whether or not the runner uses associative or dissociative coping strategies, but instead the level of intensity the runner reaches. "As the run intensity increases the runners become more associative rather than dissociative (Tammen, 1996, p. 8).

Dave: I tend to mostly associate while I am racing. There are however, moments of dissociation...but I usually tend to stay with thinking about the race... in the beginning I stay a bit more relaxed and dissociate more at this time, try to enjoy the atmosphere and absorb the experience. But I tend to shift then, more to association. One of my favorite tactics is to pull from behind, which requires more association, aiming yourself towards your target or your objectives. But then there are sporadic moments of dissociation along the way as well... they tend to just happen and are for about thirty seconds, but that is about it. But I am really thinking about the racing and what is going on, making assessments and just thinking about everything in the race.

Self- Awareness

Self-awareness can be "viewed as an understanding of self or simply a recognition by the athletes of their strengths and limitations" (Hogg, 1995, p. 2.3). Being self-aware plays a major role in the racing plan as the development of the racing plan requires an understanding of personal capabilities. This will be recognized in the effectiveness of the employed racing plan.

Guy: *Knowing what I'm able of doing, normally by this time I'd know exactly what I could do in terms of splits and whether if I run a sixty-six I'm going to feel absolutely terrible or if I'm going to feel okay... invariably with warm-up you know how you are feeling, and it was one of those days that I felt all loose, and in all my experiences it usually forebodes some kind of problem.*

Gary: *I felt it within myself, like I didn't ever think I've felt that explosive power within myself.*

Guy: *You do know what is going on while you're racing.*

Gary: *Right there I felt completely controlled the whole way and it looked that way too.*

Mary: *I think it's important to have that sense of everything around you.*

Expectancy

A number of participants felt that the expected order of finish, or "pecking order," should not play a part in the racing plan, but unfortunately it did. The athletes tried to predict where certain other athletes should be in comparison to them and they did not leave it up to the day of competition to determine the placing. The participants had expectations of the other athletes and these were considered when developing the racing plan. This can be linked to the concept of social comparison. Turning to others for comparative information most often occurs under conditions of uncertainty (Brehm & Kassin, 1989). Ignoring information about the competitors is not possible and not implied. However, relying on the competitors for a predicted placement should not be the only personal measure of ability within the racing plan. Basing the racing plan on another competitor places too much emphasis on an uncontrollable factor. What another competitor is capable of doing on any given day is beyond the realms of personal control.

Mary: *...like normally if I had been a bit more confident I would have tried to pass her but I didn't really know what I could do.*

One of the qualities that self-awareness emphasizes is that of personal identity, which has thus far been emphasized in relevance to the uniqueness of the racing plan in each of the different themes. Each individual arrives with a unique identity that has been developed throughout his/her life experience. Therefore, the level of self-awareness among athletes is a consideration in the process involved at deriving a racing plan.

Mental Imagery

Athletes who have achieved success may be more likely to engage in mental imagery (Salmoni, Hall & Haslam, 1994). Richardson (1969) defined it as:

> Mental imagery refers to all those quasi-sensory or quasi-perceptual experiences of which we are self consciously aware and which exist for us in the absence of those stimulus conditions that are known to produce their genuine sensory or perceptual counterparts. (p. 2)

Likened to a blueprint, mental imagery when used as a part of the racing plan, can help the athlete prepare for the upcoming competition. Weinberg (1981) provided support to demonstrate that mental practice combined with physical practice was more effective than either alone. "Imagery can also be used in an athlete's mental preparations and it may ultimately enhance performance" (Hogg, 1995, p. 6.3). Orlick and Partington (1988) completed a study with elite athletes and found that 99% of the sample reported using imagery techniques.

Mary: *I just really go over a lot of visualization to picture myself how I'm running.*

Guy: *... and then go through the visualization of the race in terms of the best result for me. Putting myself in exactly the situation, or in each lap where I should be, and visualizing everything obviously going the way it should be. But other than that, quite often when you are when you're jogging or when you are striding or doing your warm-ups in the three or four days prior to the race, obviously you sometimes start, your mind starts wandering on to those things and you start visualizing what is going to happen in the race before you actually do the work.*

Scott: *I make a game plan of my moves and where I want to make them and who is possibly going to be in front of me.*

Brian: *I was trying to envision myself, getting into the same type of rhythm and mode that where I have had other races that I've run really well, I can use this race that I ran abroad, as like a sort of bench mark of everything, everything was more or less perfect and how I wanted to be, and I was trying to envision myself you know running the same type of race that way, and using technique, relaxation, and the whole feeling and that sort of thing. You know trying to get myself into that frame of mind.*

This quality of the racing plan, yet again accentuates the individuality and uniqueness it has. Its time and place of occurrence deviated between the participants. The act of mental imagery happened in the minutes prior to the beginning of the race, earlier on the day of the race, the day before and the week before. The key here is that it was a valuable aspect of the racing plan independent of when it was used.

Gary: *I'll think about it this week, maybe ten minutes a day kind of thing, just kind of visualize a few different scenarios in my mind so that I'm ready for those scenarios to take place on the day.*

Rachel: *I think I've been kind of doing it all along all week, just a little bits of pieces before.*

Brian: *Well sometimes I don't want to but I do it a lot the night before when I'm lying in bed, I get pretty keyed up and just think about it quite a bit, about what I want to do, imagine all of the various possibilities that could happen, how I would react, certainly before a race I find a quiet time and I'll close my eyes, it's usually after I've gone through warm-up I usually try to finish my warm-up fifteen to twenty minutes before the race itself so I can sit down and relax and go over anything like that.*

Scott: *...on the day of the race I just sit down and think about what I'm going to do in my head.*

Dave: *I will go sit on the grass and just think about what is going to happen.*

The content of the mental imagery also deviated among the participants.

Guy: *...but I imagine that it's going to be really tough and I'm just going to be hanging, you know, it's going to be the hardest race I've ever run but I'm going to be hanging in, and it's going to be run, so I, believe, I think the other way is a mistake, I mean it's always painful and there is no doubt you have to be prepared to hurt right, it's not a good plan if you're not going to imagine what it's going to be like, so like I always imagine it's going to be fast, tremendously fast, and it's going to be a real problem, and then as soon as that, as soon as the visualization is done, it's the race.*

Andrea: *...I remember a couple of races... thinking about what I thought my competitors could do, how I thought they could do it and how I thought they could be beat, and what they thought my weaknesses were and what they believed my strengths were.*

Gary: *...playing it over before hand.*

Mary: *...actually what I just did was dropped that from my head and just went who cares don't think about it because you're going to psych yourself out and what you need to think is about hanging on to her as long as you can.*

Another aspect of the mental imagery was the function it played with the participants. "Successful athletes may be more likely than their successful counterparts to engage in such mental processes as dreaming successfully about their events" (Murphy, 1994, p. 488). Not only was it used to envision the upcoming event, but it was also used as a form of fantasy.

Dave: *Well it is imagery that I use when I am out running, things that I think about then, placing the race into my head, trying to see what I want or what I can do. I believe that there are two sides to this though: realistic and fantasy. The realistic includes my goals and things that I can do, the fantasy includes things like daydreaming about making world records. But I do think while I'm out running, not like in a session when I am visualizing the race while sitting in my room. I find this helpful in getting me through some of my monotonous training schedules*

and also during some of the harder workouts. It also helps me to build a positive self-image and also helps me to compete at a higher level.

The interrelationship between the themes has been recurrent through the study. A link between goal setting and mental imagery is demonstrated here.

Gary: *You visualize yourself accomplishing these goals.*

Mary: *...it really does work, like if you picture being relaxed then you are going to be relaxed.*

Some of the runners mentioned have difficulty in seeing some parts of the race, especially where the outcome was dependent. This may be an aspect that needs to be confronted by the athlete when developing the racing plan.

Mary: *...racing a 1000m in indoors, and was trying to picture what would happen, and for some reason I couldn't see the last 200.*

Andrea: *It is a part of the race where it can be difficult to visualize because you start to think about outcome."*

Mental imagery was used by the participants in different ways in the racing plan, however as a component, it was consistently employed. All of the athletes talked about how they implemented mental imagery and used it as a means for achieving their ideal state of performance.

Theme 3 - Tactics

A large part of the interviews with the participants focussed on the tactical component of the racing. Tactics played a major role in the development and implementation of the racing plan. Some of the key aspects to this theme are general across events, however some of the specific tactics are event dependent

General

Mary: *I was hoping that she would get in the inner lane, so that I could just fall in right away, because she was in the outer lane you want to get out and you don't want the other person right there that's on the in lane get ahead of me because I don't want to be tucked, within that at first because you want to get a good position, and I didn't want to get tucked in but I wanted her to get ahead of me so that I*

wouldn't have to take the lead, because if I was to go out really fast, I could get forced into having the lead and I really didn't want to.

Rachel: *...but the thing that I did do wrong was that I cut in way too sharp. I used up way too much energy there it should have been more of a gradual...*

Dave: *I mean during the race, nobody wants to take the lead for the whole time, so you just kind of share the lead.*

Andrea: *This race in my opinion is really bad tactics, total inexperience. I never got pushed around so much as I did here...Okay, see where I am in lane two, I ran there the whole way, look I could never find a spot and these big ** (name omitted) they just kept pushing me. I kept trying to get a spot and just look at me, that's such bad tactics... I ran the widest out of everybody.*

Mary: *I said it was just really simple and it was just hang on, as long as you can and see what you can do, it's a very easy way to run mentally ... that's a really good way to run sometimes, it's a really free way to run, and it gets rid of all of these other considerations, you don't have to pay attention to everyone else.*

Guy: *...then really only in very extreme circumstances would you let someone get away from you, so to some extent, if someone takes it out hard, you don't have too much option with the time, so I guess basically what you would do is differentiate what is allowable and what is not allowable, what's stupid and what's not stupid. If everybody went out fast and died and I still won I would be happy, but you know you have to be looking obviously to try and maximize your performance and if everybody else is stupid enough to go out way to fast and you sit at the back of the pack well it's fine.*

Gary: *With the draw I got the inside lane, and again it's not the best position to be in. It doesn't matter how fast you go off, you run into traffic. It becomes quite problematic getting into the lead and you just have to be more flexible and try and get through the pack.*

Gary: *I mean I think if you just tactically go into a race with one thing in your mind, like if I go in there on Saturday, the only thing I'm prepare to do is sit on ** (name*

omitted) and kick him down, and if something happens whereby he's got the exact same strategy for me, we're running like two minute laps, watching each other he's wanting to sit on me and I'm wanting to sit on him, then I can approach it from a different, I can mentally handle that and I'm ready for that, or if there is someone else in the race that does happen to take off and liven things up in the race that I'm ready for that as well.

Gary: *...well the one thing that I'll be thinking is to put myself in a position that I'm not going to get tripped or fall.*

Brian: *I'll race right up at the front or in the lead, depending on the field, you know if the field is a little bit weaker I will certainly try and go out and dominate and assert myself off the bat, immediately.*

Dave: *...when you are running your tactics and you know it works for you it makes everything positive, and makes you feel good.*

The above quotations can be recognized as 'general' tactics as used by the participants of this study. Any athlete, in any event, could use this tactical information to help enhance his/her performance. The next section on tactics includes quotations on 'specific' tactical considerations that are event dependent.

Specific

Scott: *The final is going to be all tactics for sure because there are seven guys that are all running the same sort of times.*

Scott: *I sort of have to decide about 200 metres into the race whether or not they're it's going to be a killer finish, or if it's going to be a sit and kick at the end, like when I'm going to have to go out really hard, because usually, well not even 200 into it, you can tell sometimes.*

Mary: *I don't really know tons of other strategies, there seems to be a couple typical ones, I think there is two or three and one's like tucking in and just, that is the main strategy and that is in order to win, if you are actually winning or for position you tuck in and then you really, it really comes down to the last 110-200 but it also depends on what other people chose, like if somebody else said okay I*

have no kick so you know what, so I'm going to go out really hard the first lap, you have to maintain contact and kind of they have that kind of race and in control, as I said you just have to maintain contact, and you still want to be able to, you want to hang on and not do anything too drastic but still maintain that kind of relaxed control by hanging on to them and then making your move when you are ready and I think that's, expending the least amount of effort possible.

Andrea: *The whole tactic for her was to stay in contact with the leading group no matter what the pace was and it got quite quick, it felt, well I was a bit nervous about that, just hanging on.*

Some of the information that the participants based their tactics on involves knowledge of the other competitors. Not only does this information contribute to the overall racing plan, but it is also a consideration for the athletes when deciding on their own tactics.

Guy: *You know I can't rely on getting out there and hanging on, because if I get out there and try and hang on it's going to fall apart, so it's deciding in what in terms, getting out and hanging on means, how fast and who with so those are the key issues in that situation...*

Guy: *Obviously you are in a race where you've got three or four guys that are faster than you are on the last lap and you can basically guarantee that you got a decision to make at some point, you are going to have to be kicking early or running harder, and that just sort of comes down to mental preparation.*

Andrea: *...and then once I let her go you know for a while, then I caught up to her and she looked she was working really hard so I put a surge in. I thought well, okay, and you know at that point I remember thinking she's hurting, I need to make it look like this is a piece of cake for me, and I just did a surge and got away from her, and she never did close it up. You know, I remember distinctly thinking demoralize her. When she was starting to hurt, make her think I'm feeling better. My coach when I was in highschool, used to say if you are going to pass, pass with authority, don't just pass, speed by and make her think there is no chance*

they are going to come back on you...

Scott: *...and he didn't want to take it out fast he just wanted to sit and kick sort of and I figure if we did that chance we wouldn't come in one or two because there were other guys that had run two seconds slower and if we were running tactical then they would be just as in there as us...*

When deciding whether or not to use certain tactics within a given competition it is important to consider the response of the other competitors. Some of the participants mentioned tactics used by the other competitors as being the same every time in a race, which gave the participant a distinct advantage of being prepared for the oncoming attack. But this can play a role reversal as well, if the tactics employed by the athlete are repeatedly the same, competitors will use this information to their own advantage.

Andrea: *She is someone who always changes her tactics in her running, she was really good at having an element of surprise with her tactics. She still had two to go and she really opens up.*

Mary: *She made a smart move she knows how I run, or she was or that she was trying to scare all the rest of us you know, and knowing that maybe she was, and like I said you get that lead not many people can catch up, it's a hard thing to do.*

Dave: *So I almost like putting myself in a position where I can come on strong in the middle of a race because I've got people to chase, now if I go out at a fast pace and look at the half way and I'm with everybody I've got nobody to chase they're either all right at my side or right ahead of me or right behind me, that sometimes I will allow myself to get in the position where I don't go out as fast or go out conservative and stick to my pace despite what other people do, or despite the fact that these guys are going out fast, I'll try to run even splits...*

Theme 4 -Technical Considerations

This theme includes some components that play an indirect and direct role in the racing plan of the participants. The components that will be discussed include distractors and event considerations.

Distractors

Distractors were another component mentioned regarding the racing plan. Distractors are things that can disturb a runner and change his/her focus and/or concentration. If the distractors have already been considered prior to the competition, and a way of dealing with them is included in the racing plan then they will not become a distraction during the race.

Rachel: *If you don't plan for it, it can be quite shocking.*

Dave: *Anything that sets me off is usually a result of poor planning on my part so I try and take care of all of that.*

Brian: *...you want to minimize your distractions as much as possible...I go through the segments of the race and evaluate where I want to be and you know if there any distractions, what my counter methods will be.*

Dave: *I usually have a strategy worked out for all of these little things.*

The racing plan may also help to reduce the effect of distractors and focus the athletes attention on task-relevant cues. Moran (1996, p. 181) suggested that "performers who focus deliberately on key pre-performance activities will be less likely to be distracted than those who do not know which cues to process." Some of the distractors that were mentioned by the participants are included below.

Rachel: *weather*

Rachel: *If the heats get cancelled and go straight to a final.*

Andrea: *...someone drops out that you really focussed on.*

Dave: *One thing that can be a bit of a problem is having too much time before the race.*

Dave: *The little details are important. And example of this would be water, getting your number and pinning it on your t-shirt, splits, your uniform, taking a look at the weather - the little meticulous things...basically the nerves. Solving all of the little problems before they come to you.*

Brian: *...like I have a heading that says distractors, well number one being pushed, number two being boxed in and number three the pace is too slow, well you have counter methods and that's so automatically you know when that happens that*

you have a word or a phrase that comes into my mind immediately to calm me down and number two to get you going on the right track.

Scott: *...when I got shoved into the inside of the track, it really just, I just lost everything like just my rhythm.*

Dave: *I guess how I handle the distractors like, the uncertainties is I just keep telling myself that I'm just getting myself ready to handle the uncertainties in international racing. And just keep telling myself, if I run the best I can run, I'm going to win or do what my goal is. So I try to push out as many distractors from my mind, I mean distractors are often external things so I'll just focus on what I can control and what I'm doing.*

Event Considerations

Some components of the racing plan that were not directly addressed, but formed a significant part of the racing plan included some elements that are often considered instinctual or intuitive. A number of these aspects simply exist within the racing plan as inevitable components. Finding specific locations; washroom and/or change room, shade, the coach's vantage point, and the sign-up table are a few examples of this component. Another major consideration included taking care of favorite food and drink prior and after the race. Each participant took care of these idiosyncratic factors prior to the event even though they were not mentioned during the interviews. This is an individualistic component, yet undoubtedly necessary for the racing plan.

CHAPTER 5

Synthesis and Discussion of Research Findings

Overview

The following section will help synthesize how the participants interpreted the entirety of the racing plan. In this section I also address some of the important features that give shape to the racing plan. The key points of the racing plan that will be addressed include the following: interpretations by the individual participants, the individual differences, the dynamic feature, the interrelationships between the components and factors, the sequence, different perspectives and applications.

What is a Racing Plan?

I believe that a racing plan is a tool that athletes can use to enhance their performance. It is comprised of a number of components and these components work together, ultimately to benefit the athlete and direct him/her toward the best performance he/she is capable of. Athletes today are very equal in terms of their physical capacity and it is often the mental state that "breaks" the runner. I believe that the racing plan can be used to enhance the performance of the athlete. Below are a number of quotes from the participants that describe what they interpreted the racing plan to be.

Brian: *It's a game plan, like a mission statement, like this is the objective, these are the goals, and then you break it down and this is how I'm going to go about doing it... it's important in the sense of understanding what you are doing and who you are racing against, you know, any race, you get a collection of eight to twelve odd guys or girls running on the track and all of varying degrees and levels of ability, but on any given day anything can happen and a race strategy will help you or help anyone prepare for that personal best whether that it's done alone, by yourself with no one really around you or a personal best in the sense that you're beating people who are better than you.*

Mary: *...I think the strategy is that, the exact race, the bare bones and the race and exactly how you are going to run it.*

Dave: *...I use a race plan as an outline to follow for the upcoming season.*

Gary: *Everything, every part of your life that relates to your running would relate to the strategy involved in racing, because you race...so the strategy behind that is everything I do in my life.*

Andrea: *To be really good at something it really means a lot more to me than ever wanting to admit. It should be fairly straightforward and instinctual and just go around and have fun and that's what it's all about. But I don't think that when you are really going for something you are really putting in a lot of time and effort into something even though that something is really enjoyable in itself... It means something to you and it means something to other people around you. You carry stuff out there and it's not that easy. Like I think if it were, everyone would do it. So, I think that is the hardest part of having these goals and strategies is that you're really acknowledging a lot of stuff that is out there.*

The above quotations illustrate the individual understandings of the racing plan. It is important to recognize the racing plan, as a whole, was identified by all of the participants. However, the interpretations and the meanings given to each component were unique. At no point during the study did I try to make one answer fit to the question of "What components does a racing plan comprise?" Instead, the interviews surrounding the topic shaped the ideas that were constructed into themes and finally recognized as components of the racing plan. One should note that, at the beginning of the interviews it was much more difficult for the participants to define what they thought the racing plan was. However, near the end of the interviews, it was much easier for the participants to integrate all that had been discussed in the interviews together to formulate a definition of the racing plan. *I guess as I'm forming this definition in my head, as we're talking now, I guess it would encompass everything to do with running really* (Gary).

Emphasis must be placed on the individual quality of the racing plan. Each participant brings with him/her a host of other factors that must be incorporated and acknowledged when developing the racing plan. Each athlete's racing experience, level of fitness, age, and personal best times contribute to the make up and implementation of the racing plan. Therefore, the racing plan must represent the athlete that is going to

implement it. No generic racing plan exists. *What works for someone doesn't necessarily work for you or maybe it will or you never know... but you can listen to someone saying this and this person is successful, that makes sense I'll try a little bit of that. But in the end it's what works for me that's important* (Brian). If a racing plan is to be developed, implemented and evaluated the appearance of the previously mentioned themes and the factors underlying them should be considered. Of key importance though, is the significance of the individuality factor. It is what will designate the value placed on these themes and hence the components of the racing plan.

The racing plan can be described as dynamic. The racing plan is used throughout the season, separately for each race, however it is a part of a much bigger picture and one uses it to reach his/her ultimate goal. One racing plan leads to the next racing plan and so on. The components of one racing plan do not determine their significance in the next one, instead the requirements of the athlete and competition will distinguish the components that are essential and the significance of their presence. *It is always dependent upon where I am racing and who I am racing against, everything can change what you're planning to do and you know, you have to take all of that into consideration each time* (Gary). Attached to the dynamic feature of the racing plan is the continuum of significance of the components. Inconsistency in regards to the importance placed on certain competitions distinguishes a difference in the importance placed on the components. In one competition it may be imperative for the athlete to maintain a continuous state of relaxation, whereas the athlete may place less of an emphasis on relaxation in the following competition. Ultimately the decision to place a stronger emphasis on one component and less on another rests with the athlete and his/her experiences with these components. The racing plan will not remain the same throughout the season as the requirements for each race will dictate distinct qualities that must be present in the racing plan. "The ability to perform to one's full potential consistently, despite variable competitive circumstances, is the hallmark of athletic expertise" (Moran, 1996, p. 181).

The components of the racing plan are very interrelated. The components of the

racing plan have been discussed, in Chapter 4, as separate and unique parts. However, this presentation of the components and factors does not emphasize their inevitable interrelatedness. They are not just separate entities that make a final product, but instead attached and related to each other. The tie between the themes was recurrent and an interesting aspect of the study. Not one of these themes stands alone without relation to another. They all incorporate different aspects of each other which contributes to the holistic essence of the racing plan. An example of this was suggested by Barr and Hall (1992) who contended that imagery helped to control arousal level which in turn helped the athlete to focus and build self-confidence. Imagery can be used to direct athletes to focus on their goals, relaxation and other mental aspects necessary for personal peak performance (Paivio, 1985; Salmoni, Hall & Haslam, 1994). So from here we can see how imagery is linked to some of the other factors and components in the racing plan. All of the other components share a similar underlying interrelationship and this helps to give further insight into the racing plan as a whole.

A number of common themes emerged from the data and have been discussed in-depth: goal setting, mental skills, tactics, and technical considerations. The dynamic and individual quality of the racing plan will designate the value placed on these components. As well, the interrelationships among the components must be deemed important in the overall significance of the racing plan.

Sequence

From a performance perspective, it is important to note the direction and focus of this study. I recognized and suggested at the beginning of the study that mental skills may play a role. Cohn (1990) suggested that pre-performance routines (likened to the racing plan) comprise both cognitive and behavioural elements. It is from my background that these a priori predictions were suggested. My focal interest was to present the racing plan as a holistic phenomenon and the components that emerged were deemed important, whether or not they were mental skills. The overlapping of the physical, mental, technical and tactical was identified, and contributed to the overall understanding of the racing plan.

After analysing the data and the written interpretation of the themes, I found an

integrating aspect of the racing plan. The themes, as portrayed in the previous section, suggest a common link besides their evident role within the racing plan. It is important to discuss this link to further the understanding of the racing plan. The sequence of the components plays a significant role when considering the process of the racing plan.

Goal setting occurred prior to the actual implementation of the racing plan. This component has the ability to act as an outline for the athletes. Each race of the season plays a role in the overall goal/s of the athletes and therefore can be considered a starting point for the development of each individual racing plan. *I set my goals way before the race, but I guess that too depends on the race, sometimes the goals for like an all-comers aren't that bold or you know, important, but then others are like right from the start of the season, or even continued from last year* (Mary). Goal setting also provides essential components that must be considered and implemented into the racing plan: realism, difficulty, goal series, flexibility, goal type, specificity, assignment and evaluation. Each racing plan that has been used contributes to the preceding ones and the elements included. Goal setting helps the athletes to remain focussed during the season and more specifically in each race. When the racing plan is at the developmental stage, all of the factors that constitute the goal setting process must be considered in the racing plan. This is not to suggest that it is the most important component of the racing plan, however, it should be regarded as a significant starting point for the racing plan.

The mental skills component of the racing plan and the factors contributing to this component cannot be ordered universally. Instead the factors and their placement should be considered by each individual athlete. Mental imagery does not always precede relaxation, instead the individual athlete must learn what works optimally for him/her, and hence reflect the individualistic quality of the racing plan is reflected. *I always use a sort of relaxation thing before my races, it's almost like a ritual, just fifteen minutes before and it doesn't matter what race or where or whatever* (Scott). As well, this does not suggest that all of the mental skills are pro-active either. Some of the mental skills such as self-awareness and relaxation may occur prior to the actual race and other mental skills may occur during the race or even after it. They may be used at a number of different

times that include pre-race, race and post race distinctions. As previously discussed, the components of the racing plan include a very individual element. To what extent they are utilised and the occurrence is strictly an individual decision.

The next theme that was discussed in relevance to the racing plan was the tactics. The tactical component of the racing plan actually occurred during the actual race. However, knowing and understanding the tactical options available prior to the race must be considered. The participants mentioned knowing a number of tactics that could be employed at any given time during the race. The actual usage and recall of this information was deemed important to the overall racing plan.

Finally, the last theme discussed was the technical considerations that the participants included into the racing plan. Not all of these factors were explicitly stated or consciously acknowledged, but were consistently included into each racing plan.

The distinction of the sequence of the racing plan was recognized. Preparation for each competition carried a number of important variables that had to be considered. Each component cannot be placed into a time of occurrence or suggested period in accordance with the race. Each component requires different amounts of preparation, and its occurrence in the racing plan is variable too. For example, one athlete may include mental imagery in the racing plan only on the morning prior to the race, whereas another athlete may include it on a daily basis. Each individual will have different requirements for the components of the racing plan.

Application

At the beginning of the study I suggested that the racing plan could be used as a tool for performance enhancement. For effective implementation, the racing plan should include appropriate information and thus, an understanding of the components was and is deemed important. Furthering the understanding of the racing plan and its function as a tool for athletes is an important contribution to the application of it. The application of the racing plan pertains to the athlete, the coach and the sport psychology consultant. The racing plan in relation to the aforementioned individuals will be addressed below.

By employing the racing plan, athletes have the opportunity to evaluate and reflect

on different components used during the race. Whether the racing plan is written or simply conceptualized in the mind, the opportunity to integrate the information and build on it for future races is possible. Getting the most out of the performance in all aspects of the components implies a better understanding and awareness of personal capabilities. Using the racing plan as a tool for performance enhancement can help the athlete progress to a higher level of performance.

The coach plays a major role in the racing plan. Coaching requires a multidimensional relationship between the athletes and the coach. The role of the coach is dynamic, being required to be an educator, physiologist, business executive, and psychologist (Martens, 1990). Having an understanding of the racing plan can be effective in "providing training and reinforcing optimal psychological states" (Williams, 1986, p. 303). The coach spends a lot of time with his/her athletes. Having an understanding of the athletes may give the coach an advantage of knowing what the athletes may need to include in their racing plan and in the end, enhance their performance. The responsibility for the racing plan ultimately remains with the athlete, however, the knowledge and understanding the coach possesses may influence it.

The sport psychology consultant can use the separate components of the racing plan to break down the parts of the race and each of the components. If these components can be identified and a problem exists, an intervention can be applied. The consultant can also use the components of the racing plan as a teaching implement. Working with the athletes, the sport psychology consultant can provide information about the components and offer the athletes a broader knowledge base to work with and use to enhance their performance.

The racing plan can be applied to a number of different individuals and their different roles, as well as a number of different settings. The underlying focus, however, is how the racing plan can be applied to benefit the athlete and lead to performance enhancement of the athlete.

Different Perspectives

A number of different perspectives and approaches to the racing plan were

introduced in the Review of Literature (Chapter 2). I would like to integrate this information to further broaden and deepen the understanding of the racing plan.

One area that I would like to address is that of strategic control factors (Strean, 1997). Originally they were perceived to be game relevant, but I feel that they can be applied to track and the racing plan. The strategic control factors are: time, space, force, uncertainty, and psych. I believe that these five factors are used in the tactical component of the racing plan. The following offers an example of how each of the five factors were integrated into the racing plans (tactical component) by the participants:

1. Time - (Gary) *It is just a heat so I have the opportunity to play around a little bit more with the time, I can try and find a place where I feel comfortable pushing the pace, or where I have the energy and explosion, there won't be anyone that can come close to me realistically, so I will just try and change things around a bit, and use the time to my advantage, which is against all my competitors.*
2. Space - (Mary) *It all depends on what the race is or, I mean what it means to me, because I will have some options with that kind of thing, like I can be in the middle just sitting on the lead pack waiting for something to happen or just using this to play off of because I know I have a kick and I can use that at the end, they don't necessarily know this, but of course it depends on who you are racing against but you can play their game as much as they will play yours.*
3. Force - (Rachel) *...running more closely to the outside of the lane, and that might have pushed them out, or left more of an opening or simply make them run farther and make them tire more quickly.*
4. Uncertainty - (Mary) *I didn't think she was going to take that much of a lead that quickly, ... she made a smart move, she was trying to scare all the rest of us you know, and knowing that now maybe would make a difference in future races.*
5. Psych - (Andrea) *And then once I let her go, you know for awhile, then I caught up to her and she looked like she was working really hard so I put a surge in. I thought well, okay, and you know at that point I remember thinking she's hurting, I need to make it look like this is a piece of cake for me, and I just did a surge and got*

away from her... you can break someone's mental will.

From these examples, the use of the five strategic control factors is evident within the tactical component of the racing plan.

Another area that was previously highlighted in the review of literature was the five elements within the 'racing strategy' as proposed by Hogg (1994): (a) performance relevant factors, (b) actual performance factors, (c) thoughts and emotions, (d) self-awareness, and (e) the use of cue words. The results section of this study suggest a number of different components, however, correspondence exists between the two perspectives. For example, performance relevant factors and actual performance factors play a role in the tactical component of the racing plan and self-awareness is recognized as a factor underlying the mental skills component. In light of the findings within this study I would suggest that a number of other 'elements' should be considered relevant to the racing 'strategy'. Where do distractions fit into this perspective? What role does the mental skill visualization play in the understanding and implementation of the racing plan? Furthering the understanding of the different perspectives that are connected to the racing plan can help our understanding of athletes and their performance.

CHAPTER 6

Future Implications

As it was suggested, we must wake up to the idea that athletics, like everything else, is not, nor ever can be perfected; there will always be more to learn.

Overview

Many directions for future research can be drawn from the data obtained and portrayed. Experiences, expert vs. novice, gender differences, and other aspects related to the racing plan, such as, body image, self-confidence and aggression will be addressed in light of their implications to the racing plan.

Experiences

When discussing the racing plan with the participants, an aspect of personal growth was identified. This was especially apparent in reflection of the past employed racing plans. A number of the participants recognized a difference in the racing plans they were using currently compared to those of recent years. Experience in competition and the situations that occur play a role in the racing plans implemented succeeding these events. Learning from successes and errors combine to enhance performances of these elite athletes. This aspect can only be mentioned here as it was not a purpose of the study to evaluate the differences between experiences of the racing plan throughout time.

The purpose of the study was to describe the components of the racing plan of elite middle distance runners. The description of the experience of the racing plan was not a proposed objective of the study. The experience of the racing plan is a large aspect that still needs to be studied. How the racing plan is interpreted is tied to the experience and hard to analyse separately or independently. Yet, I tried to focus primarily on the descriptions of the racing plan without including the experiences attached to the phenomena.

Differences Among Athletes

There is no evidence or suggestion that the racing plan is only for the elite, but I believe that a difference would exist when investigating the elite versus the novice middle distance track athlete. Mahoney, Gabriel and Perkins (1987) have reported that elite

athletes show superior anxiety control, concentration and mental preparation skills when compared to non-elite athletes. The literature also suggests that the difference between skills level of American elite athletes can be based on the difference of psychological skill level (Cox, Liu, Qiu, 1996). As well, Chantal, Guay, Dobreva-Martinova and Vallerand (1996) also supported this notion with the contention that the best performing athletes in comparison with less successful athletes reported external sources of motivation respectively. This suggests that a difference may exist between the elite and novice athlete in contention to the racing plan.

It was not a purpose of the study to examine gender differences in the racing plan, but this information may be useful for future research. No prominent differences were recognized involving the inclusion or exclusion of components of the racing plan. This may be deemed important for future research, as the role of the racing plan or its implementation may be different according to gender.

Aspects Related to the Racing Plan

A number of other aspects that were related to the racing plan were discussed in the interviews. I will address body image, self-confidence and aggression and their implications for future research in relation to the racing plan.

Literature in the area of body image has emphasized the over concern with body size, fear of fatness and body image among female college athletes. This preoccupation among female athletes has reached such pervasive levels that authors have noted it as normative among this population (Levine & Smolak, 1992; Striegel-Moore, Silberstein & Rodin, 1986). All of the female participants at one point during the interviews, brought this concern of body image into discussion. This is an area for future study to develop an in-depth understanding for this phenomenon among females.

Self-confidence cannot be represented as a component within the racing plan, but instead a characteristic of the athlete. Self-confidence is one of the most frequently cited psychological factors believed to play a role in athletic performance and has been called the most critical cognitive factor in sport (Feltz, 1984; Gill, 1986). It was also a very prominent concept in this study. A higher level of self-confidence was demonstrated by

those athletes that had competed for more years at the elite level than those just entering this level of competition.

Another characteristic of the athletes that played a role in the racing plan was aggression. Aggression is not a component of the racing plan, but a disposition of the athlete that may need to be addressed when developing the racing plan.

A final consideration for future research would include an in-depth understanding of each component and the role it plays. The complexities of the themes were not introduced in this study, instead a basic understanding was given for the purpose of the descriptive component of this study.

Conclusion

At the beginning of the study I set out with the purpose of discovering what the components of a racing plan of elite middle distance runners were and how the athletes interpreted them. Outcomes of the study suggest that the phenomenon of the racing plan is complex. The participants in the study recognized a number of components that were applicable to their individual racing plan. It spite of the diversity and intensity of the components a number of themes emerged from the data: goal setting, mental skills, tactics, and technical considerations. A discussion of these themes provided an interactive look at these components of the racing plan.

The results of this study suggest that the racing plan is an element in the performance of the athlete. Based on the findings of the study, participants consistently recognized a number of common aspects and hence components of the racing plan.

A preliminary analysis of the racing plan has been addressed. By no means do I think the question, "What are the components of a racing plan for elite middle distance runners" has been answered completely. The study leads to many future directions and implications for a better understanding of the complexities and intricacies of the racing plan.

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Appendix A

Informed Consent

Racing Plans of Elite Middle Distance Runners

Principal Investigator: Gina Arena 437-7126/652-1049
Supervisor: Dr. Billy Strean 492-3890
Faculty of Physical Education and Recreation
University of Alberta

The purpose of this study is to explore the racing plans of elite middle distance runners and describe the components they comprise.

As a participant, I will be asked to engage in 3 interviews to discuss my experience using a racing plan. These interviews will be audio-taped and transcribed. I will be observed during my training sessions and during one race. I will also be videotaped during 1 race and will review that race with Gina. The audiotape and videotape will be used for research purposes only. If I choose to take part in this study, I will spend approximately 4 hours in total, engaged in interviews. This time will be spread out over 2 weeks in 3 interviews (1- 1 ½ hours long each). The time and place of the interviews will take place at my convenience.

I understand that my identity will remain anonymous and that any data collected within the study will remain confidential. The only people with access to this information will be the principal investigator and her supervisor. Any written report will not include actual names and identifying details will be altered or omitted to protect identities. All audiotapes and videotapes will remain in a secure location and will only be used for research purposes.

If for any reason at all I do not want to participate in this study, or if I chose to end my involvement at any time, I am assured that there will be no negative consequences.

If I have any questions concerning this study, they will be answered by Gina.

By signing this form, I agree to:

1. Participate in approximately 4 hours of interviews
2. Have interviews audio taped
3. Have one race videotaped
4. Being observed during training sessions and one race.

Signature of consent to participate in this research project and acknowledgement that I have received a copy of this consent form.

_____ Date: _____

Investigator _____